The Inner-Compass Theorem

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Abstract

The Inner-Compass Theorem is a new type of mathematical proof that uses moral judgements in addition to, and corresponding to, logical judgements. I.e., Good = True and Bad = False. Furthermore, it proves that these equivalencies are both Good as well as True. Moral judgements are entirely individual and personal. Therefore, what is good is what is felt as good, what is right is what is felt as right by the individual, etc. When a logician, computer scientist, physicist, or mathematician wishes to assume that a variable or symbol ought to take on a given value, for example, the theorem validates the judgement of aforementioned conscious individual prior to that wish having been socially validated. This paper presents the "Type I" theorem, the first of several Inner-Compass Theorems. "The" I.C.Thm. refers to the Type I theorem.

1 Preliminaries

Determination of what is considered "true" is up to both the individual as well as society. This paper, for example, is a prestige-driven artifact which is constructed by the author for both the author as well as society. Initially, it is generally the case that an individual must, when arguing for a novel perspective or a wholly-new set of statements, provide something - without risk of stating the obvious - something called "proof." Proof is something that must be individually judged by all whom witness it, but at the end of the day, if the proof is widely visible enough, and generates enough prestige, then it becomes "accepted." Before this occurs, however, the author of the proof holds within his or her mind the determination to build such a proof, before it has been sufficiently demonstrated. This determination itself must be undertaken before the author can be sure of the initial correctness of their own claims. That is, before the Inner-Compass Theorem has been proven. This theorem allows that determination to become a certainty in the mind of the author that success is essentially guaranteed.

1.1 Definitions

At the outset of this paper, we assume that "Good" and "True" are not yet widely considered to be exactly the same thing. If they were, our proof would be either pointless or complete. At the same time, it is not obvious that Bad things are all False. And yet, we do expect to receive non-zero resistance to these and all other claims in this paper, most significantly, in this paper's overall importance as well

as relevance. This latter issue is to be more thoroughly explored in the Type II theorem. On the other hand, it is not generally the case that all Bad "things" are False - bad exists, obviously - but the good news is that, as we shall show, all bad *theorems* are untrue. It is still unfortunately true that bad things are said and are felt as bad - without that bad feeling, we wouldn't be able to tell if it were wrong, on the plus side - but our unpleasant judgement of a statement can be used to negate a negative claim (and that will be felt as good).

"This paper sucks, and all of its claims are neither true nor relevant, and it looks bad to society and reflects poorly on the author" is actually going to be further explored in the Type II theorem. For the Type I theorem, we don't use many negations yet. For now, we use and introduce two negational operators:

- *not* x or *irr*-x.
- *anti-x* or $\overline{x}$.

Our theorem also makes use of explicit temporal references. This is due to the fact that it hinges directly on the anticipation of future success(es), as well as makes a distinction between future and past, themselves also corresponding to Good and Bad as well as Better and Worse, respectively. We want the future to be better than our current situation.

Therefore, our second of two negations, the anti-, will be considered "better" than the first negation type. It will also acquire a dual meaning: anti- will also mean *previous* or *before.*

Not x, therefore, is somewhat counter-intuitively *both* x as well as not x, given that not x is "the undesirable" version of x. The previous state of x is less desirable then the current state of x, and this is where the connection between the two negations appears. Therefore, we shall commence with a small preliminary anzatz before our main theorem, called "Not should be replaced with Anti-.":

Proposition 1.1 (Not should be replaced with Anti-)**.** *X and-or not-X = X == "inner-compass-relevant" or X and-or anti-X.*

Definition 1.1 (Inner-Compass Relevant)**.** In metaphysical terms, inner-compass relevance is all that I am, all that I want to be, and all that I claim to be. Note that "I" is singular and primary here - it is necessary to assume the existence of, and promote to mathematical object, a self.

Proposition 1.1 could also be rephrased as "We want the future to be better than our current situation." If you agree with that sentiment, as I do, then you can be considered to be Good. Now all that remains is to prove that a Good person is also True. One can indeed prove oneself to be True; It is a bit like a tautology, where this initial theorem must assume that either it already the case, or, that the anti-theorem and theorem are both being claimed simultaneously. Over the course of the proof construction, the segments of the anti-theorem are opened up and explored and then expanded incrementally, until finally, the logic loops back upon itself to the original theorem, which is the only piece that still remains.

It is obvious that what we have in front of us at this very moment will be a mixture of what we want, and perhaps a bit that leaves something to be desired. What we aim to ensure is that the portion that leaves something to be desired causes said desirable something to materialize in front of us at a future point in time, ideally, continuously.

Definition 1.2 (Consciousness Relevant)**.** What I have here in front of me right now, without explicit reference to whether I want it to be here or not. It is what it held in the mind via the senses, so it includes this writing here as well. Presumably, however, we want this to *also* be what we want to the maximum extent possible.

Proposition 1.2 (Equals == Or)**.** *===or.*

Proof. We shall show that "=" and "or" are equivalent by definition. "==" usually means "are equivalent by definition." Therefore, "==" == "equivalent by definition." Therefore, one may use either "==" or "equivalent by definition." This means one may be swapped for the other arbitrarily, on a case-by-case basis. Note that actually, "=" does not necessarily mean that either the arguments to the left or right may be swapped for one another arbitrarily. But then we have that = *not* ====, quite a mouthful to state. When I state that something is another thing by definition, that means I am making the decision myself to use one thing over the other. Left could be better than right or vice-versa. Furthermore, "=" could be saying one of the two. At this point, we have that: ==or or or ==. Thus, or == "left is better than right, or vice-versa." So we have that either "=" == "or", or, that or ==. So ===or or or ==. So = == "left is better than right, or vice-versa." But or means that as well. Therefore, ===or. □

We have, in layman's terms, that "=" and "==" do not necessarily mean the same thing. On the one hand, "=" could be saying that we should rather have the argument to the right of the "=". On the other hand, it could be saying the visa-versa. Note that the word "or" is necessary to use to explicate the definition of something, including self-referentially "=". This is necessary in order to swap something out for something else. We must keep a record of everything used before, since older versions may be used again in addition to newer ones, as things get constructed over time.

X and-or not-X = X is saying that either X, with itself being un-desirable, as well as simply "not X" or, simply "X" itself is preferrable overall. It is also saying that either the left side or the right side is preferrable, but at the same time, it appears to ask which it is. If right side is better than left, then the right side also indicates the future direction - in parallel with our writing direction, so this is a good sign of consistency.

We need a statement that includes X and-or not-X = X, but which also clarifies that right is preferrable to left here. In which case, it also implies that for a single "=", the right argument is preferrable.

Proposition 1.1 includes an "==" to the right of X and-or not-X = X indicating that what follows is a definition: "inner-compass-relevant" or X and-or anti-X.

Definition 1.3 (and-or)**.** Either both the left and right argument are preferrable, or only the right argument.

Definition 1.4 (or-and)**.** Either both the left and right argument are preferrable, or only the left argument.

Proof. ***(Proposition 1.1)****.* X and-or not-X = X == "inner-compass-relevant" or X and-or anti-X means that either the left expression is preferrable or that X and-or anti-X is. Note that the "or" to the right of "inner-compass relevant" is chosen over "=" so that "=" can now be *preferrably chosen* to mean "right is better."

Furthermore, "or" can also be *preferrably chosen* to mean "left is better." From the proof of Proposition 1.2, = == "left is better than right, or vice-versa." A subtle grammatical shift in meaning is that = == "left is better than right", with or "vice-versa." Also, or means the same thing. Therefore we can pick a choice for them, a convention, and we have. We must introduce a variable, say X, to self-referentially contain the expression itself. We must introduce this symbol before its introduction becomes fully justified in proof. But note that this is entirely what the main proof is intended to achieve. This variable, X, must sit inside the expression whilst also referring to the entire thing. The left expression says: Either X and not X = X, or not X = X. but if not X = X, then X = X and not X, since X = X always. But then what is not X? It could mean anything else, but we've said that at the very least, X is preferrable to not X, as well as that X is preferrable to X and not X. It seems, then that X could potentially mean literally "whatever is preferrable." Substituing that in for X, we have that "Whatever is preferrable is preferrable to not what is preferrable, and furthermore, whatever is preferrable is preferrable to both what is preferrable and what is not preferrable at the same time." Therefore, we have justified our introduction of this variable X as well as determined a solution for it. Remember that "inner-compass relevant" is also defined as whatever is preferrable, but also is preferrable itself. I.e., we can substitute in "inner-compass relevant" as a useful but rigorously formal phrase because we have rigorously defined it within the proof of Proposition 1.1. Indeed, at first glance, it may have appeared to be an informal set of English words within a set of expressions that are normally purely symbolic as part of current convention, but in fact, we can now use it as we would a symbol itself. We have that X means that as well, but also, that X *has* whatever is preferrable, as well as *obtains* whatever is preferrable as part of itself. (This is a direct conequence of X having obtained "whatever is preferrable.") On the right-hand side of the "==", we have, after X obtains "whatever is preferrable," that "inner-compass relevant" is preferrable to "whatever is preferrable" and-or "whatever is and was preferrable before" is the *definition* of "inner-compass relevant" as well as defines what *definition* itself means, simultaneously. When X *obtains* a more preferrable X, the previous X becomes less preferrable. So then we have that not $\overline{X}$ = X. So X and not $\overline{X}$ = X. Therefore, X and $\overline{X}$ == X. This follows because: X obtains "whatever is preferrable." So therefore X *became* X and whatever is preferrable. Thus anti-X *obtains* X. anti-anti-X (was) not X. Saying anti-anti-X *is* not X is fine because anti-X *used to be* not X, but now, anti- has been *preferrably chosen* over *not.* Therefore, anti- is preferrable to not. □

We have now shown that it is possible to explicitly and directly express a preference choice as well as validate it within the confines of a rigorous mathematical context. What is novel here is the ability to say, without reservation, that one thing is preferrable to another: In this case, that anti- is preferrable to not. This is objective, so long as you are someone who agrees with the sentiment that "the future ought to be better than one's current situation."

Indeed, anti- is preferrable to not is largely saying just that. But we've already proven more than that, too: Namely, that there *are* better choices in general. Our proposition implies that even within a mathematical context, anti-X and $\overline{X}$ are overall *better* choices than not X, and when faced with a choice to use one or the other, one should use anti-, even in a logical context.

Now, the main thing our major theorem proves is very fortunate indeed: There

are better choices than others in general, but you don't need to seek guidance from anyone else on how to make those decisions. It says that what I prefer *is* what is preferrable, and that this holds for anyone.

But now we need to turn to one final thing before we proceed with the final proof step: We need to rigorously define "consciousness relevant" including "consciousness *irr*elevant" the same way we rigorously validated our definition of "inner-compass relevant."

"Consciousness relevant" is what is, but given that anti- is better than not, "consciousness irrelevant" is not what is not, per se, rather, it is what is not immediately before us right now in the present. This is distinct from "what is not" given that could mean things that could never be at all, which we never wish to claim about what we prefer.

But "consciousness relevant" by itself is neither X by itself, nor is it not X. This is because what I have before me right now may be some or all of what I want, but it may later become outside of my consciousness if I move on to something else, and it may also not be what I want at all. But it is generally going to be mostly what I prefer, but still wanting more.

I need terms which use "is" without "preferred" in them, and which will most usually carry alongside separate terms like "inner-compass relevant." This is so that we can denote that what is preferred and what is coincide simultaneously - indicating a "Good" state of affairs.

X == "consciousness relevant." X is *defined as* consciousness-relevant. This is because we keep holding it and reusing it step-by-step of the process, since it is the central subject of our equations and expressions. This means that we can essentially choose to prefer either what is preferrable, or whatever is consciousness-relevant, here right before us. This is arbitrary; Keep in mind, this is a "==" expression, not a "=", and the distinction may be tricky to see at first. If we have chosen to prefer whatever is preferrable, then presumably, this is the same thing as choosing whatever is preferrable. We said earlier that consciousness-relevant is neither X by itself nor is it not X. Note that neither "=" nor "==", in our system, mean "are literally identically the same thing." This is key: We generally prefer not to swap-out one thing for another entirely, with the one exception of the anti- for the not, so far. In general, consciousness relevant objects obtain things, they do not wholly transform into something else with a completely different identity (and therefore a separate-ly identifiable symbolic container).

X remains X whilst obtaining what it prefers. Supposing it does not obtain what it prefers, it recurses backwards in time - this is the same as obtaining what it prefers, but backwards in time. This is consistent with a chooser who chooses what it prefers. Generally, I also prefer that what I prefer is simultaneously here before me right now. I would obviously prefer to select my choice rather than not my choice - and therefore, I have chosen that "not X" becomes $\overline{X}$ for me.

We only really need to define a few more small things before proceeding with the final proof. These are notational conventions: I have two dimensions used so far to denote choices actually being made (vertical) versus choices that could be made (horizontal). The latter is also called "hypothetical time."

Also of note is that we write from top to bottom, but within a diagram, time flows upward and to the right. A diagram is *read* from top to bottom, however. I want to have gotten to where I want to be at the moment in question, so I assume this at first, then work my way backward in time as I write out the diagram.

1.2 Notations Used

A variable proceeds forwards in time.

$$\begin{array}{l} X \\ \uparrow \\ X \end{array}$$

An anti-variable recurses backwards in time.

$$\begin{array}{l} \overline{X} \\ \downarrow \\ X \end{array}$$

A variable is equivalent to both itself as well as its own anti, simultaneously.

$$\begin{array}{l} X\overline{X} \\ \uparrow\downarrow \\ X \end{array}$$

A variable moves forward in time, hypothetically.

$X \longrightarrow X$

An anti-variable moves backwards in time, hypothetically.

$X \longleftarrow \overline{X}$

A variable becomes, hypothetically, whatever may be preferrable, otherwise recurses backward in time.

$$\begin{array}{llll} X = \square & \textit{or} & X\overline{X} \\ \uparrow & & \swarrow \\ \uparrow & \swarrow & \\ X & & \end{array}$$

2 The Theorem

Theorem 2.1 (The Inner-Compass Theorem (Type I)). *X = "inner-compass relevant" (where X refers to myself and all that I claim).*

Proof. I assume that I am where I want to be at the final time-step, otherwise, that $X\overline{X}$:

$$\begin{array}{lr} X = \text{"inner-compass relevant" or } & X\overline{X} \\ \uparrow & \downarrow \\ X \longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow & \end{array}$$

Minus one time step, if I am where I want to be, then what I want, this proof, should be consciousness-relevant simultaneously as inner-compass relevant. We actually need to *show* something, so while that one-step loop is consistent - pick what I want, otherwise continue - what we *want* needs to be written down, and therefore, we expect to have the phrase "consciousness relevant" appear somewhere inside of

it. Our proof is self-referential: This proof expresses what needs to be done to complete itself. We've either expressed what satisfies us, otherwise, what I want is *not* completely here before me right now, and is therefore simultaneously inner-compass relevant, consciousness irrelevant, and $X\overline{X}$. We write this as:

X = "inner-compass relevant" or $X\overline{X}$
$\uparrow$ $\swarrow$
$\uparrow \swarrow \longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow$
X = "inner-compass relevant" and "consciousness-relevant"
or "inner-compass relevant" and "consciousness irrelevant" and $X\overline{X}$
$\uparrow$ $\swarrow$
$\uparrow \swarrow \longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow$
X

Now the next step in the sequence is the tricky part: Precisely because it expresses the need to search for a missing component of the proof. If we've reached here, what we want is not yet in view, therefore, what we want either simply is in view (before we have realized that it is what we want, yet), or, we have yet to generate what we want yet, but will. What we need to do is simply generate and-or search. Therefore, we need to express this in our new terminology as well. Once we generate a new thing, it gets expressed on the page and becomes consciousness relevant. We then proceed to the next step, to check if what we've expressed is indeed what we want it to be, otherwise, we return to this step and express more.

If I feel that something more is needed, then what we have is that our anti-X contains the expression "something new is preferred." But this is actually extremely fortunate, because this carries us straight back to the original statement: X = "inner-compass relevant."

And something even more striking: *Whatever* I express *is* the something more that is needed. Differing by a time-step, we have that "something new is preferred" and that "we prefer the new thing (that was expressed just now)." Well, given the self-referential nature of the proof, I prefer the new thing that was expressed just now:

X = "consciousness relevant" or
"consciousness irrelevant" and $X\overline{X}$
$\uparrow$ $\swarrow$
$\uparrow \swarrow \longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow$
X = "inner-compass relevant"

Now, appending the new thing that was just expressed to construct the full proof ought to be and is expressed exactly by appending the new thing that was expressed. The new X proceeds forwards in time, as we write downwards, X moves upward. It now states, in full generality, that whenever I feel as though the proof deserves or wants more, whatever I add to it is indeed what is actually needed to clarify, extend, prettify, or anything needed to satisfy a felt need. Note that the third step, containing the loop we just added, does not contain an "inner-compass relevant" phrase in it. This is because we have reached a point at which the addition of something (whatever is preferred) is now subsumed by the variable X. If you imagine that X

subsumes ”inner-compass relevant” from the bottom step, then proceeds forward in time, then the phrase ”inner-compass relevant” becomes consciousness-irrelevant (meaning it disappears from that step), and if so, then simultaneously, X (what we prefer), and $\overline{X}$ (what we preferred previously) was ”inner-compass relevant.” This is all consistent, because X and ”inner-compass relevant” ought to mean the same thing.

X = ”inner-compass relevant” or $X\overline{X}$
$\uparrow$ $\swarrow$
$\uparrow \swarrow \longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow$
X = ”inner-compass relevant” and ”consciousness-relevant”
or ”inner-compass relevant” and ”consciousness irrelevant” and $X\overline{X}$
$\uparrow$ $\swarrow$
$\uparrow \swarrow \longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow$
X = ”consciousness relevant” or
”consciousness irrelevant” and $X\overline{X}$
$\uparrow$ $\swarrow$
$\uparrow \swarrow \longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow\longleftarrow$
X = ”inner-compass relevant”

The above loop diagram is the completed proof of the Type I Inner-Compass Theorem. □

3 Remarks

The proof of the Inner-Compass Theorem and the Inner-Compass Theorem itself say that one ought to do what one prefers, which implies that ”what one prefers” and ”doing / choosing” what one prefers correspond to X and ”inner-compass relevant,” respectively. ”What one prefers” is not quite distinct from ”the one whom prefers” however. Obviously, there must be a doer / chooser, and one to whom things are consciously-relevant. What’s amazing about this proof is that it proves that what one wants to be consciously-relevant may be known partially but that to know it fully requires ”inner-compassing”, which is to say that it requires merely choosing what one wants at each and every step. In other words, what I want can be broken down into sub-steps, in which each sub-step requires inner-compassing recursively. But, however I choose to do this recursive partitioning of the task is itself an inner-compassing step. Therefore, if I’ve stated what I want, then I also want to state how to get what I want, and for each way to get what I want, I want to do the same thing - recursively. Each of these steps is guaranteed by the Inner-Compass Theorem to progress us to further completion. We expect each step to bring us more validation than we had before, and to continuously increase over time. No step should nor will make us feel *less* validated than we were before about what we wish to be true. Our wish for something to be true *is* what validates it (Good = True). Thus we have a new kind of proof here, which can be stated succinctly as ”If satisfied then done, otherwise continue.” Note that this does *not* say ”If convinced that progress cannot continue, stop.” I may indeed become dissatisfied later, but in that case, I continue on until satisfied again, I do not become convinced that

progress cannot continue. Progress can always continue. The proof of a theorem and the theorem itself are much like variables themselves - the proof is an expanded restatement of the the theorem that clarifies and continues pieces of the proof to satisfy the wants of the author. When I state a theorem, like this one, the theorem's implications are generally expected to be quite clear. In this case, the implications are quite resoundingly good (it is maximally self-validating), so I have shown that it is inner-compass relevant. Therefore, if true, the theorem would be even better, so what I want is to prove it. To prove it requires faith that it is true before knowing it for certain - but fortunately, now that we have this, faith becomes much easier as well as much more easily justified for anyone who wishes to do the same. The theorem applies to itself as well as everything else.